Kodak digital science™ PRODUCTS

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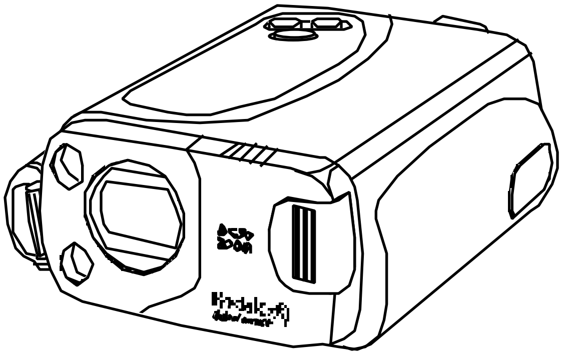
DIGITAL & APPLIED IMAGING TECH TIPS

Kodak Digital Science™ DC50 Zoom Camera

FREQUENTLY ASKED QUESTIONS



Product Availability and General Information

Q Where can I buy the camera?

A The DC50 zoom camera will be available from popular mail order catalogs in February,1996. Or, to find a dealer in the U.S. call Kodak at 1-800-508-1531. In Canada, call Kodak at 1-800-465-6325. Outside of the United States and Canada, contact your local Kodak representative to find a dealer.

Q How is the DC50 zoom camera different from the Kodak Digital Science™ DC40 Camera?

A The DC50 zoom camera uses the same sensor as the popular DC40 camera but adds three key features:

- **3x zoom lens**. A motor-driven lens lets you take pictures from a wide-angle view to as much as three times the magnification for close-up shots, all at the touch of a button, with automatic focus and exposure control.
- **Higher-quality pictures**. You can select “Good,” “Better,” and “Best” options for every shot, adding a new and superior image option to satisfy more demanding requirements for high quality pictures.
- **PCMCIA removable storage cards**. Along with 1 MB permanent memory inside the camera, the DC50 zoom camera also can store pictures on removable PCMCIA ATA-compatible (Type I or II) storage cards that allow much faster access to pictures. With this new option, you can remove the cards at any time to access pictures. You can also pop in a new card when one card is full, allowing you to shoot pictures without interruption.

Q Which camera takes better pictures, the DC40 or DC50?

A Although both cameras use the same image sensor, the DC50 zoom camera takes pictures of slightly better quality than the DC40 camera when using the “Best” option. This is due to the DC50 zoom camera's lower compression rate and improved image algorithms. The “Good” and “Better” options of the DC50 zoom camera are the respective equivalents of the “Low” and “High” resolution options of the DC40 camera.

Q How big is the camera?

A The dimensions of the camera are: Depth 5.8 in. (147 mm), Width 4.3 in (109 mm), Height 2.5 in (64 mm). The camera weighs 22 ounces (0.62 kg).

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Q How does the DC50 zoom camera differ from the CHINON ES-3000, RITZ DAKOTA, and DYCAM 10-C cameras, which look so much like it?

A Because the DC50 zoom camera uses a *Kodak* image sensor designed specifically for computers, and Kodak's image processing algorithms to process the images, the result is higher quality pictures than other cameras. Additionally, the DC50 zoom camera is *fully compatible* with PCMCIA-ATA Type I and II removable storage cards.

Q Is the DC50 zoom camera more difficult to use than a regular camera?

A The DC50 zoom camera is just as easy to use as a conventional point-and-shoot camera. The camera allows you to capture “goof-proof” digital pictures with just the push of a button. Simply open the lens cover to turn on the camera and frame the subject in the viewfinder. Press the shutter button and the camera captures the picture as it appears in the real-image optical viewfinder. The DC50 zoom camera features automatic focus using an infrared beam with multi-spot, center-spot, and close-up capabilities. The LCD display on the back of the camera features easy-to-understand camera icons. The camera's other point-and-shoot features include a 10-second self timer, flash override, and tripod mount.

Q Do you need to buy anything else to make the camera work with MACINTOSH or WINDOWS systems?

A The complete DC50 zoom camera package includes the camera with 3x zoom lens, a handstrap, PHOTOENHANCER software with a software guide on disk for both WINDOWS and MACINTOSH systems, serial interface cables for WINDOWS and MACINTOSH systems, four AA lithium batteries, a user guide, and warranty/registration card. PCMCIA cards are not included with the camera, and must be purchased separately.

Q Can the camera be used with a POWER MACINTOSH 9500, WINDOWS NT, or UNIX computer?

A The camera can be used with MACINTOSH OS Software and all POWER MACINTOSH Computers, WINDOWS 3.1, and WINDOWS 95 Software.

Q What is the effective focus range of the camera?

A The DC50 zoom camera’s lens can focus on objects at distances from 18 inches (46 cm) in close-up mode, and 28 inches (71 cm) to infinity (∞) in normal mode.

Q What is the shutter speed of the camera?

A The DC50 zoom camera incorporates an automatic shutter control that fires at speeds of $^{1}/_{15}$ of a second down to $^{1}/_{500}$ of a second.

Q What is the aperture range of the camera?

A The DC50 zoom camera automatically sets apertures ranging from *f* / 2.6 to *f* / 24. If you wish, the camera allows you to override the automatic exposure feature.

Q What is the range of the camera's flash?

A When light levels fall below a certain point, the camera automatically activates its built-in flash, effectively illuminating objects as far away as 14 feet (4.27 metres).

Q What is the ISO rating equivalent for this camera?

A The camera has an ISO rating equivalent of 84.

Q Can images be viewed on the camera after they've been taken?

A No. The images need to be downloaded to a computer to be viewed.

Q What is the resolution of this camera?

A The camera uses the *Kodak Digital Science*™ KAF-0400C image sensor which delivers a resolution of 756 x 504 pixels, higher than most competitive 24-bit color digital cameras. The camera saves images in three different compression ratios, “Good,” “Better,” and “Best.”

Kodak research and development teams designed the sensor to capture exceptional detail, making the DC50 zoom camera well suited for capturing pictures used in reports, presentations, and other desktop publishing applications. The DC50's sensor is a highly-photosensitive semiconductor called a charge-coupled device (CCD). Consisting of nearly 400,000 separate photosensitive elements, the CCD changes light into electrical signals that are converted and encoded into digital data for digital still photography.

To understand the importance of the sensor, some digital cameras use sensors adapted from video camera applications. These sensors work well for television, but when adapted to digital still photography they have a negative impact on image quality. Although the video sensor (CCD) used in some digital cameras is about the same size as the DC50 zoom camera's sensor, the similarities end there. The light-sensing area of the video sensor is less than half that of the DC50 zoom camera's sensor. The much larger light-sensing area on the DC50 zoom camera's sensor means it yields pictures with higher resolution and more information - in short, better pictures. Moreover, video sensors use interlaced scanning, which can blur pictures of even slowly moving subjects. Designed from the ground up for digital photography, the DC50 zoom camera's sensor uses a scan readout to give the best results for computer displays and printers; and the sensor won't blur pictures of moving objects.

Q How many pictures can the camera hold?

A The camera's 1 MB permanent memory can hold 22 “Good” quality images, or 11 “Better” quality images, or 7 “Best” quality images. If you are using a PCMCIA card in the camera, the number of images which can be stored on the card depend on the card’s capacity. For example, a card of 5 megabytes can hold approximately 120 “Good” quality images, or 55 “Better” quality images, or 35 “Best” quality images.

Q Do I need to make multiple exposures for each image?

A No. The camera’s area-array image sensor gives single-shot color, you can even photograph moving subjects at *any* shutter speed available on the camera.

Q Can I use the Good-Better-Best option to take pictures of different quality during the same shooting session?

A Yes. Using the Good-Better-Best option on the camera you can take pictures of different quality during the same shooting session.

Q How big are the pictures?

A The camera's imager provides a resolution of 756 x 504 pixels, suitable quality for a wide variety of applications. Acceptable print size for pictures depends on the output type and your needs. For color or black-and-white laser or ink jet prints, your pictures will look good up to at least 4 x 6 inches (approximately). (For optimal results with ink jet printers, use *Kodak* Ink Jet Photographic Quality Paper, available in a variety of weights and as clear transparency film.) For thermal printers, pictures up to 3 x 4.5 inches (approximately) will look good. The imager captures 24-bit color to give pictures true colors and good detail.

Q Will pictures be lost if the camera's batteries go dead?

A No. The pictures will remain safely stored in the camera’s permanent memory or on a PCMCIA card until they are downloaded.

Q Are other lenses available for this camera?

A Not at the present time.

Q Is there a tripod mount for the camera?

A The camera contains a standard tripod mount.

Q How many pictures can the camera take on one set of batteries?

A A set of 4 fresh AA lithium batteries should provide enough power to take up to 500 pictures.

Q What type of adapters are available for the camera?

A A universal electrical adapter, Kodak catalog number 102-3662, and 120V adapter, Kodak catalog number 888-9933. Both items are available through your dealer where you purchased your camera with US standard list pricing of $74.95 and $58.95 respectively.

Q Can this camera be used for microscope photography?

A The camera lens cannot be used on a lens mount necessary for microscopy because the optics of the camera and microscopes are incompatible. *Kodak* Professional DCS 420, DCS 460, and DCS 465 Digital Cameras are capable of microscope photography. For more information about these cameras, in the U.S. call 1-800-23-KODAK (800-235-6325).

Q What is the warranty for this camera?

A A one year warranty comes standard from Kodak in the United States.

Q Is there government or education pricing?

A GTSI/Falcon offers GSA schedule pricing for government. A plan for education pricing is under development (not yet available).

Computer-Related Information

Q Does the camera always have to be connected to a computer?

A The camera only needs to be connected to a computer to view or download pictures.

Q What type of file does the camera download to the computer?

A. The camera downloads images in Kodak's Native file format to the computer. PHOTOENHANCER Software, which comes with the camera, allows you to open Kodak's Native file format and save your pictures in a variety of formats such as TIFF, PICT, EPSF, BMP, JPEG, or Kodak's Native file format.

Q How big is the image file created by the camera for each picture?

A The image file for each picture is just over 1 megabyte. One image will fit easily on a 1.44 MB high density diskette.

Q What is PHOTOENHANCER Software used for?

A. PHOTOENHANCER Software, which comes with the camera, enables you to download and view your pictures on your computer and perform simple color correction and retouching of your images which you can then save in a variety of file formats.

Q What type of printing can be done with PHOTOENHANCER Software?

A PHOTOENHANCER Software (included with camera) can print single pictures in full resolution or multiple pictures, called a Slide Table, in reduced resolution. The Slide Table feature allows all the pictures as you see them on the screen to be printed on a single page.

Q Does the camera have removable storage?

A Yes. The DC50 zoom camera is one of the few digital cameras, priced under $1,000, to support PCMCIA removable storage card that are ATA-compatible (Type I or II). By complying with this industry standard, these cards can be recognized and read by any PCMCIA-ATA card reader, with no special software drivers required, a feature that is unique to the DC50 zoom camera. As a result, people using this card will be able to transfer a picture to their computer in a few seconds¾about twice as fast as access through a camera's serial port interface.

Q What type of image compression does the camera use?

A The camera uses Kodak's proprietary RADC (Run Adaptive Differential Coding) image compression.

Troubleshooting and Technical Support

Q Where is PHOTOENHANCER Software support available?

A Call PICTURE WORKS, the maker of PHOTOENHANCER Software (software is included with the camera) at 510-855-2009 or fax at 510-855-2019, for software support. The PHOTOENHANCER User's Guide for MACINTOSH Computers and WINDOWS Software is available for downloading from Kodak’s World Wide Web site (http://www.kodak.com).

Q I am having a problem downloading images stored in my camera's internal memory to my MACINTOSH POWERBOOK 5300 Computer, any suggestions?

A The problem with downloading images stored in the DC50 zoom camera's internal memory seems only to occur with the MACINTOSH POWERBOOK 5300 Computer. Images stored on a PCMCIA card can be successfully downloaded to the MACINTOSH POWERBOOK 5300 Computer without problem.

INFORMATION FROM KODAK

For more information about Kodak Digital Science products and solutions check:
Kodak forum on America Online, keyword KODAK
the Kodak forum on CompuServe (GO KODAK);
the World Wide Web at http://www.kodak.com;
the Kodak Internet listserv at photo-cd@info.kodak.com; or ftp at ftp.kodak.com.

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